

SOCIETY MEETINGS

VOL. IV NO. 3

G.W.U. ENGINEERS MONTHLY



Mecheleci

WASHINGTON, D.C.

MARCH 10

ENGINEERS' BALL

MARCH, 1945

**SOCIETY
MEETINGS
MARCH 7-8:15 P.M.**

The engineering societies resume their individual meetings on March 7 after the large joint meeting in February. Every engineering student owes it to himself as well as his chosen profession to attend the society of his choice. It has been pointed out many times already that activity in professional societies is almost as necessary as knowing that $E = IR$. Also, your fellow student who is carrying just as great a load of work as you is endeavoring to make these monthly meetings as interesting and broadening as he can. How about it, fellows? COME OUT and take an active part in the proceedings.

The ME's will have a student speaker at their next meeting but like most of the student speakers he has "a lot on the ball". Mr. S. S. Podnos, Ordnance Engineer at the War Dep't will speak. His subject, Artillery Ammunition, is of vital importance in these times. The time of the meeting is 8:15 pm and the room will be announced later. As usual, refreshments will be in order.

Since bridges are important to the Civil Engineer, the ASCE will show slides depicting the construction of one of the world's great structures, the Waterloo Bridge in England. The room number will be placed on the Bulletin Board. LOOK for it.

Continuing its program of showing the tie-up between transportation and Electrical Engineering, the KR's will be privileged to hear Mr. M. L. Prescott, District Representative of the Transmitter Section, Radio Division of the General Electric Co. His topic will be entitled Communication and the Railroad. Much has been written about this subject already but if you want to get the "inside-dope" you'll be in Building D (exact room to be announced later) at 8:15 p.m. on March 7. RESERVATIONS will be served.

ENGINEERS' BALL

AT WARDMAN PARK
ON MARCH 10TH

Because of the recent request by the government that places of amusement be closed by 12 midnight, the time of the Engineer's Ball has been changed from 10-1 to 9-12. This, however, is the only change in the plans to provide a gala evening for everyone who attends.

Arrangements have been made with the Wardman Park to provide a refreshment bar which will serve "cokes", club soda, ginger ale, and ice. Glasses will, of course, be furnished.

The intermission will see many of the old contestants return to test their oculatory skill with the "Kiesometer". Wagers are being made among some of the students as to who will hit the jack-pot this time. Last year, a married couple copped the honors but many of the single men are out to prove that practice does not make perfect. Needless to say, interest is running high in the Engineering School and the Engineer's Council promises prizes to the winning couple.

This Fourteenth Annual Engineer's Ball will also serve as a meeting place for all those engineering alumni who are within travelling distance of the Wardman Park the address of which is 2640 Woodley Rd. NW, on the corner of Woodley Rd. and Connecticut Ave. The alumni will find that the Ball will afford an excellent means for not only getting together with their old buddies but to meet the embryonic engineers who are soon to be their colleagues. The Engineer's Council of GWU would be pleased to see as many of the old-timers as can possibly get there.

To review the vital statistics - Place: Wardman Park Hotel, Continental Room. Time: March 10 at 9 P.M. Dress: Semi-formal. Price: \$2.40 per couple. Tickets will be sold at the door but try to get yours now from any member of the Engineer's Council.



THE MARCH SCHEDULE IS:

- 7 - Societies
 - AIIE Communication and the Railroad
 - ASME Artillery Ammunition
 - ASCE Slides of Waterloo Bridge
- 10 - Engineers' Ball
- 14 - Theta Tau - long meeting
- 17 - Theta Tau - initiation, banquet and dance
- 21 - Council Meeting
- 28 - Sigma Tau - long meeting

The meeting rooms for each activity will be posted on the bulletin board outside Dean Feiker's office.

MECHLEICIV

WASHINGTON, D.C.

The MECHLEICIV is put out monthly by the undergraduates of the Engineering School of George Washington University. It is prepared at 620 23rd Street, N.W. Washington, D.C., Executive 7599, and it can be reached at this address.

Editor-in-Chief...Fred Holcomb
Assoc. Editor....Ralph Potter
Feature Editor....Alfred Barsuck
Art Editor.....Harmon Holcomb
Chief Typist.....Betty Nathan
Advertising.....John Paraskevas
Printing.....H.C. Katmon
Distribution.....Alfred Albert

EDUCATION IN THE PRESS

If you pick up almost any technical magazine today, not to mention a great number of non-technical magazines, you will find an article about technical education.

ELECTRICAL ENGINEERING, in its February issue this year, printed "Goals in Engineering Education" by Dr. William E. Wickenden, their abstract of which follows:

"The engineering profession will find it hard to rise above its educational source, and there is no magic through which education can rise above its teachers."

"More emphasis on the humanistic studies, more time devoted to fundamental science and a basic analysis of the undergraduate course Dr. Wickenden proposes."

PROCEEDINGS OF THE I.R.E.

published an article in its January issue this year by Mr. F.E. Stansel entitled "Concurrent Graduate Study Its Place in Postwar Engineering Education", summarized as follows:

"This paper, which represents some personal views of the writer, advocates a more extensive development of facilities for graduate study taken concurrently with professional duties. The advantages of such a program are pointed out, and certain changes in educational routine that may be desirable are discussed."

These are but two examples of what can be found in many such magazines. We hope the students will join this discussion and give their views.

The following article by Prof. akers, is the third in a series of articles running in the MECHLEICIV by the professors of G.W. in which they express their own personal views on education and its future in G.W. Engineering School.

THE POST-WAR SCHOOL OF ENGINEERING

(by Professor Milton K. Akers,
Acting head, Electrical
Engineering Department)



Engineering is new. It is hard for us to whom engineering is a part of everyday thinking, to realize how new. I have an Engineer's Handbook, published only a little more than a hundred years ago, that presumes to cover the whole field of engineering, as probably it did, that is devoted almost completely to the construction of lighthouses and without the mention of "strength of materials" in it.

Engineering was first a craft. A craft that was concerned primarily with construction, with the engineer little more than the foreman of a group of skilled craftsmen. A concept that is still quite prevalent even among many who should know better.

Science too, in any thing like its present form, is new. It has been but a few hundred years since the experimental verification of scientific conclusions was looked on with contempt by the philosophers of the day and only a few years since text books in physics were commonly "natural philosophy".

As scientific understanding and knowledge grew, the gap between science and its application as represented by the work of the craftsman, no matter how skilled in his craft, naturally widened. Engineering logically, found its place in filling this gap and the engineer became the interpreter, translating the findings of the pure scientist into the working knowledge of the craftsman.

At one of our recent "Mixers" President Marvin said that engineering was an "attitude of mind", "a point of view". By that he meant, I believe, that the engineer was interested in science, for example, not for the sake of the science, as is the scientist, but for the knowledge that it gave him that he could use in its applications to the needs of mankind. As

(Continued in the next column)

I see it, that means science broadly in all its various forms, and the needs of mankind broadly, not merely its mechanical conveniences; though it is in the mechanical application of scientific findings that the engineer makes his most direct contact with the world of everyday living.

Thus, the spread of the field of engineering as a profession, is from the scientific research laboratory on one side to the economic and administrative application of its findings on the other. At the two limits it merges with the work of those in the respective fields and is indistinguishable from them only by the viewpoint of its practitioners. With this viewpoint, at the undergraduate level the important thing is not subdivisions of the profession but the overall whole.

In the undergraduate years the student should acquire the tools of his profession; the sciences and mathematics that are its foundation stones; English, language, history and those subjects that enable him to understand the culture of his own and other lands and to put his professional conclusions into convincing, attractive form for the guidance of his associates as well as the layman; and, administration, economics, business, etc. that are necessary for the functioning of his profession in the economic world in which he must practice. Note please, that at this level the course names that have been used are primarily administrative divisions of the general subject of education and that each is taught in more or less degree in all the others.

Obviously, if the student is preparing himself for engineering he must learn how these general subjects of a technical engineering nature. Here "viewpoint" marks the difference between technical engineering and the profession. For example: to design a machine that will function properly is a technical engineering problem; to design a machine that will fill a human need and that can be manufactured and sold at a profit in a competitive business world is a professional problem.

To design an engineering curriculum to meet the needs of the engineering profession is a professional problem that requires a study of the field of engineering education and a clear understanding of the objective of such (Continued on the next page)

an education. To tack a post graduate year on top of the present curriculum is the wrong approach. The need is, as I see it, a re-survey of the whole problem of engineering education and if, as I believe is true, the time has come when a complete redesign is indicated, to undertake that task and carry it through to completion.

Here are some of the factors that lead to the conclusion that now is the time for such a redesign: First; The advancement of science has steadily widened the gap between itself and its applications, and engineering must fill that gap. Second; Science has not only advanced but has broadened its scope. At the same time the craftsman has become more scientific. Our profession therefore must become both broader and more scientific. Third; Given the foundation on which to build, highly technical, specialized engineering knowledge is now better acquired in industry than in any engineering college. This is due to the experienced personnel and the unequalled facilities that are there available.

FOURTH; THE WAR WITH ITS REQUIREMENT FOR A GREAT NUMBER OF TRAINED EXPERTS IN SPECIALIZED FIELD, WILL HAVE CREATED AN OVER-SUPPLY OF TECHNICALLY TRAINED MEN UNLESS THE ENGINEERING PROFESSION CAN CREATE THE NEED FOR THEIR SPECIALIZED EXPERIENCE. ON THE OTHER HAND, IF THAT NEED CAN BE CREATED THE GENERAL STANDARD OF LIVING WILL BE RAISED BY THE APPLICATION OF THEIR TRAINING. Fifth; Depleted enrollment makes an overall redesign much simpler to incorporate in the educational program. Sixth; The impact of war on the nation, like the impact of a severe illness on the individual, has lead to a reevaluation of fundamental concepts: Witness the Atlantic Charter, Dumbarton Oaks, our concepts of democracy. Education has received the same impact and engineering education should be made stronger and better by that impact, just as we expect any post-war machine to be better than its pre-war prototype. Seventh; Four years is too short for adequate grounding in the engineering fundamentals now demanded in the (Continued in the next column)

engineering profession with much time given to specialization in even its major subdivisions.

All this leads inevitably, to the conclusion that education for the engineering profession should be first of all broadly engineering with education for the specialized fields added as graduate years; just as the specialized physician is first of all a doctor with his specialization starting from that basis. We must recognize also that the first year in the specialized field will be broad in that field, the higher specialization being left to industry where the job can in most cases, be better done.

A FREE WEDNESDAY NIGHT

In the July, 1942 issue of the MECHELECIV a complaint was registered. To wit - why must seminar classes be held on Wednesday nights - the nights when the Engineering School activities meet. Well, it took almost three years to happen, but not Wednesday nights are free of any engineering classes. The MECHELECIV is pleased to see that its tiny voice finally reached the ears of those people who determine the course of the Engineering School.

It is hoped that some day students will be able to take a more direct position in aiding the administration of the Engineering School. Instead of voicing gripes and suggestions to individual professors it has been suggested that a student be appointed by the Engineers' Council to attend certain meetings (not all) of the Dean's Council. What do you, the student or professor, think of that?

FINANCES

Financially, the MECHELECIV is in need of further assistance. It costs around \$25.00 to put out one edition of the paper plus what ever mailing expenses arise. With this in mind, it is hoped that additional contributions will be received so that we can continue to print the paper. Contributions from a dollar up are greatly appreciated and can be made to the Engineers' Council.

SOCIETY SLANTS

The joint meeting of the three societies last February 7th, held in Government 101 was devoted to the discussion of the Automobile and its post war modifications. Also under scrutiny was the method of productions and their development during the war. Mr. Sherman, a staff engineer of the Automotive Council for War Production from Detroit was the speaker. It was somewhat of a let down for the planners of the meeting to find that while Mr. Sherman was willing to come from Detroit most, at least a great number, of the students were not able to make it from their homes. Lets all watch the bulletin boards in the future and be on hand at every society meeting.

Professor Cruickshanks, faculty advisor of the American Society of Mechanical Engineering, tells us that some of the members of the A.S.M.E. have not as yet picked up their pins now available in his office. The February issue of MECHANICAL ENGINEERING is also available at his office for the members of the A.S. M.E.

Plans have been made for the celebration of the 10th birthday of Gamma Beta Chapter on March 17 at which time the initiation will take place. As is the custom, a stag banquet after the initiation followed by a dance will round off the festivities. The initiation-banquet and dance committee consisting of Brothers Barauk, Holcomb, and Pida has procured the Roger Smith Ballroom for the banquet and dance. The initiation will probably be held in the Columbian House, 21st and G Sts.

On Wednesday, February 21, two more men were pledged to Theta Tau. These men, Alfred Albert and John Doan join the ranks of the eight men already pledged.

The very active alumni chapter promises that many of the brothers will be present.

The time schedule is as follows: 6:15 - Initiation; 8:00 - Banquet; 10:00 - Dance.

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ALUMNI-NEWS-NOTES



William C. Thom

WILLIAM C. THOM, Head Ordnance Engineer at the Naval Gun Factory, Washington D.C., graduated from the George Washington University with a degree of BS in CE in 1904 and CE in 1905. He was born Sept. 20, 1861, and attended the grammar and high schools in Washington, DC. He entered the George Washington University in 1900. At that time, the University was known as the Columbian University and occupied a large building on the southeast corner of 15th and H Streets NW.

There was organized at that time an association of presidents of all the classes of the different schools of the University and Mr. Thom was the president of this first association. He received the Schmidt prize for his standing in Mathematics, Descriptive Geometry and Mechanical Drawing. He was a charter member of Gamma Eta chapter of Delta Tau Delta. In 1905, when the name of George Washington University was adopted, he received the degree of C.E.

After graduation, Mr. Thom was employed in the Design Division at the Washington Navy Yard. During the first world war he was promoted to Chief Draftsman, and now serves during the present war as Head Ordnance Engineer. He has had an important part in the development of many of the ordnance designs now in use on all of the combat ships of the Navy.

He has attended many of the annual Banquets given by the Engineers Council with his son, George Chester Thom, who also is a graduate BSME and KE of the University. He has been a member of the Washington Society of Engineers since 1912 and served as its vice-president in 1939. He now serves as President of the Engineer Alumni Association of G.W.U.

The MECHELECIV is now being sent to around 750 Engineering alumni, through the cooperation of the G.W.U. Alumni Association. Therefore it is the desire to include material of particular interest to the alumni. Any contributions in this line from the alumni will be greatly appreciated. (theEd.)

A letter from Ensign WHIT BEATSON, U.S.N.R. states that he is leaving soon for the Pacific...Sgt. AL VARSIS is operating a mobile radio station somewhere in France... All last information Lieut. WILBUR SKE, U.S.M.C. expected to be sent to the Pacific coast... MIKE BONDY, was last seen at the G.W.U.-N.D.R.C. in Cumberland Md... Capt. COCK, of the C.E. department is evacuating civilians in German territory... LOU BERKLEY, U.S. Army Engineer is at Fort Belvoir, Va. in O.C.S... MARSHALL BROWN left for the Army last Monday... NICK TOTOLO and NED SCHREINER, both at Naval Research Lab, Belvue D.C., are now Ensigns, U.S.N.R... Further information is desired about other alumni so let us know about your friends and about yourself.

SCHOOL DAZE

"I shall illustrate what I have in mind," said the professor as he erased the blackboard.

Little boy: Mother, do they have skyscrapers in Heaven?
Mother: No, dear, it takes engineers to build skyscrapers.

A pessimist is one who thinks all women are trivial. An optimist merely hopes so.

How fat I am...
I used to wasn't...
The reason is...
I daily doesn't.

Some people just don't get this math; for instance, the guy who thinks a slide rule is a law of friction.

When a fellow breaks a date he usually has to. When a girl breaks one she usually has two.

ENGINEERS
(55) and
PEOPLE

ARNOLD M. KRONSTADT, student in Mechanical Engineering, has the distinction



of being the first Brooklynite to be interviewed by the Mecheleciv. He was born there in 1919 and attended school in Brooklyn except for a few years when he lived in Wilmington, Delaware. Kron-

Mrs. Kronstadt

stadt graduated from James Madison High School in Brooklyn and then enrolled as a Mechanical Engineering student at the City College of New York.

Arnold only went to CCNY 2 1/2 years but during that time he managed to play varsity football in addition to excelling in his studies. He left New York in 1940 and after 6 months working as a clerk for the Civil Service Commission he decided that Washington Navy Yard was the place to be and he has been at the yard ever since. He is a Mechanical Engineer there.

G.W.U. became Arnold's extra-work activity in 1941 and it will continue to be until this June when the letters B.M.E. are attached to his name. During his stay at G.W.U. he has become a member of the A.S.M.E. and is now Vice-President of the Engineers' Council. Everyone including Arnold was happy when he became a pledge for Theta Tau.

Kronstadt has been married for 5 years to Ruth Anita Kronstadt who serves him (not often, we hope) his favorite drink, Scotch with a rye chaser. The best hour of the day for Arnold is around 11 p.m. when he leaves lab.

Though he is graduating in June, Arnold intends to return in order to work for his B.C.E.